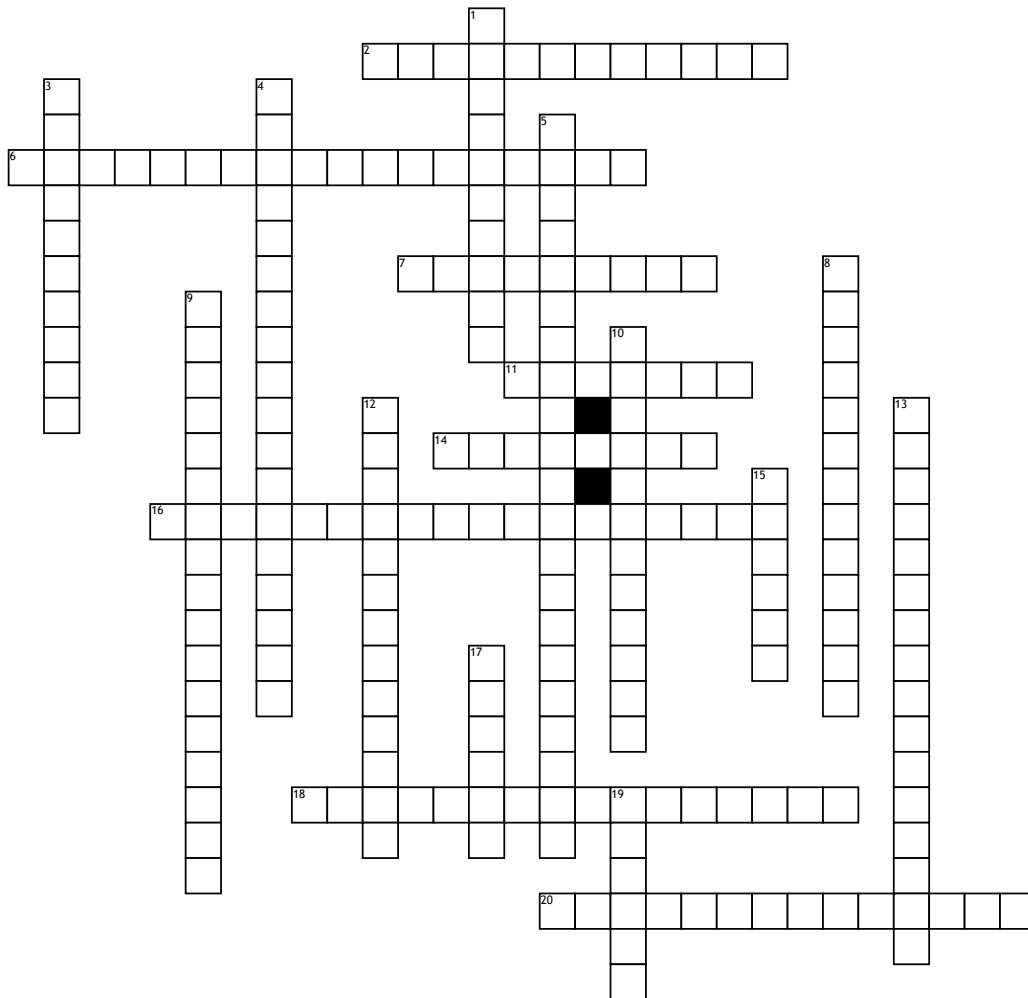


Name: \_\_\_\_\_

# FUN PUZZLES FOR ALL AGES



**Across**

- 2. a function is the place where a function reaches its highest point, or vertex, on a graph
- 6. one of the form  $f(x) = ax^2 + bx + c$ , where a, b, and c are numbers with a not equal to zero
- 7. a quantity representing the power to which a fixed number (the base) must be raised to produce a given number.
- 11. expression involving roots, also known as an Nth root
- 14. a polynomial of two terms
- 16. Explicit Formula:  $a_n = a_1 + (n - 1)d$
- 18.  $x \times x \times b = x \times a - b$ ,  $x \neq 0$

- 20. the line that divides a figure into two parts that are mirror images

**Down**

- 1. 90 degrees
- 3. a number that produces a specified quantity when multiplied by itself.
- 4. the way that scientists easily handle very large numbers or very small numbers
- 5.  $(ab)^c = abc$
- 8. is all about triangles.
- 9. a sequence of numbers where each term after the first is found by multiplying the previous one by a fixed, non-zero number called the common ratio
- 10. a function is the place where the graph has a vertex at its lowest point

- 12. is a function of the form,  $f(x) = ax^p$ , where  $a \neq 0$  is a constant and p is a real number
- 13. If  $p(x) / (x - a) = q(x)$  with remainder  $r(x)$ , then  $p(x) = (x - a)q(x) + r(x)$
- 15. the plane figure enclosed by two radii of a circle or ellipse and the arc between them
- 17. each angular point of a polygon, polyhedron, or other figure
- 19. a unit of angle, equal to an angle at the center of a circle whose arc is equal in length to the radius

**Word Bank**

- |                     |                           |                   |                     |
|---------------------|---------------------------|-------------------|---------------------|
| remainder theorem   | logarithm                 | power function    | quadratic functions |
| arithmetic sequence | radical                   | trigonometric     | maximum value       |
| right angle         | power of a power property | sector            | radian              |
| scientific notation | geometric sequence        | vertex            | binomial            |
| square root         | minimum value             | quotient property | axis of symmetry    |